

2	<b>COMBINED WRENCHES AND PUMPS OR OILERS</b>	7	.Jewel setters'
3.05	<b>SHELL, PROJECTILE, OR WAD EXTRACTORS</b>	7.5	.Mainspring winders
3.07	<b>RECEPTACLE CLOSURE REMOVER</b>	8	.Ruby pin setters
3.08	.Having discrete retainer or receptacle for removed closure	8.1	<b>PACKING</b>
3.09	.Combined or plural	9.2	<b>STYLUS</b>
3.15	..Attached to receptacle or closure	9.21	<b>STAMP SCARIFIER</b>
3.2	.Power-, vacuum-, or fluid pressure-operated	9.22	<b>PERFORATOR AND INKER</b>
3.25	.Wall or surface mounted or supported	9.24	<b>TAPPET ADJUSTER</b>
3.31	..With receptacle supporting or grasping means	9.26	<b>FLOWSHARE HOLDER</b>
3.32	...With bottom support	9.3	<b>HOSE-CLAMP APPLIERS</b>
3.33	..Rotary remover device, gear or lever actuated	9.4	<b>WIRE STRIPPER</b>
3.27	..Lever or prying type	9.51	.Bench tools
3.35	.Movable into or over handle	9.41	.Having relatively movable clamp and blade
3.36	.With additional receptacle-engaging means	9.42	..Clamp and blade move relative to supporting structure
3.37	..Lever- or gear-translated closure remover	9.43	..Blade moves relative to handle to remove insulation
3.29	..For engaging receptacle about closure (e.g., socket type)	9.44	.Pivoted blade
3.39	..Bottom support	10	<b>NUT LOCK</b>
3.4	.Gripping type	13	<b>BOLT HOLDERS</b>
3.41	..Finger grapple type	15.2	<b>REPAIR TOOLS FOR RESILIENT TIRES</b>
3.42	..With reciprocating closure-engaging	15.3	.Holders for spread tire casings
3.43	..With deformable strip-tightening means	15.4	.Deflating tools
3.44	..With pivoted closure-engaging parts	15.5	.Combined cement injectors and plug or patch inserters
3.45	.Screw type	15.6	.Cement injectors
3.55	.Levering or prying type	15.7	.Plug or patch inserters
3.47	..With impaling or inserting remover	15.8	<b>SKID CHAIN APPLYING TOOLS</b>
3.56	..Having discrete relatively movable portions	15.9	<b>FOR LOCK OR LATCH</b>
3.57	..Having handle, intermediate hook, and end fulcrum	16	<b>CHUCK KEY</b>
3.48	.Impaling or inserting type	44	<b>HOLDER, PUSHER, OR SETTER FOR DRIVEN-TYPE FASTENERS</b>
3.49	..With lateral projection or abutment	45	<b>SHINGLE TOOL</b>
3.5	<b>SPECTACLE</b>	46	<b>WOODEN FLOORING TOOL</b>
3.6	.Plier	300	<b>TOOL JAW(S) POSITIONED BY RELATIVELY MOVABLE PLURAL HANDLES (E.G., PLIERS)</b>
3.7	<b>LEAF-SPRING SPREADERS</b>	301	.Including hydraulic features
3.8	<b>FUSE PULLERS</b>	302	.Antipodal jaw surfaces move apart as handles approach (e.g., outwardly expanding jaws)
4	<b>ENGRAVERS' CLAMPS</b>	303	.With three or more jaws
6	<b>WATCHMAKERS'</b>	304	..With single pair of handles
		305	...Double pair Janus-jawed
		306	....With jaws fixed to handle(s)
		307	...With intermediate jaw(s) in line with and between outer jaws
		308	...With three jaws only
		309	....Two pivoted jaws and one sliding jaw

310	....Three coacting pivoted jaws	344	...Predetermined and discrete member of leverage selections
311	...With separate jaw pairs	345	..Axial motion of handle-attached actuators(s)
312	....Parallel jaws perpendicularly spaced	346	..Pivotal motion about axis of parallel actuator rod(s)
313	..With means requiring a completion of travel of jaw movement	347	..With means to articulate and/or slide both jaws
314	..With means for step-by-step jaw movement	348	...With means for arcuate motion of both jaws
315	..With means to immobilize handles against relative angular movement and means to move jaw(s) thereafter	349	....Cam actuator
316	..With plural selective handle positions	350	....Dual pivoted actuator levers
317	..With means for relative longitudinal handle movement	351	....With jaws pivoted together
318	..With means to immobilize jaws	352	...With means for parallel movement of work-engaging surfaces
319	..With lock-release means	353	....Longitudinal guide means
320	..With lock-disabling means	354	....Lateral guide means
321	..Including spring-urged handles or jaws	355	..With means for sliding jaw actuation
322	...And spring-urged latch	356	...With adjustment means
323	..Spring-urged latch element(s)	357	....Pivoted pawl type
324	..Positive lock means	358	...Pinion and rack
325	...With plural selective jaw positions	359	...Claw lever and rack or notch
326	....Threaded lock means	360	....Plural teeth on claw
327	....With threaded jaw adjustment means	361	...Grip lever and cam
328	....Interdigitated lock means	362	...Grip lever and link
329	..With means (nontoggle) to hold jaws against only retrograde movement	363	....Toggle link
330	..With plural preselective jaw positions	364	..Including claw lever and rack or notch means
331	..Manipulated lock member	365	...With adjustment means
332	...Pivoted bail	366	...Plural teeth on claw
333	...Sliding yoke	367	..Including toggle means
334	...Threaded member	368	...With toggle release
335	....Nut	369	....By means acting on intermediate pivot
336	...Pivoted rack	370	....Release means carried by grip lever
337	...Pivoted pawl	371	.....Mounted on intermediate pivot
338	..Rack and pawl means	372	...With means to limit movement of intermediate pivot
339	..Coacting friction means	373	...With means for relative parallel movement of jaws
340	...Serrated surfaces	374	...With pitman between grip lever and intermediate pivot
341	..With means to vary range limit(s) of jaw movement	375	...With toggle linkage and actuated jaw mounted on carrier
342	..Jaw-actuating means (handle-manipulation conversion)	376	...With connecting rod between grip lever and actuated jaw
343	..With means to choose one of a plurality of actuator leverages	377	...With connecting rod between grip lever and handle member

378	....With actuated jaw pivoted on handle member	411	...With pivot pin fulcrum in notched slot
379	.....With means for resiliently biasing jaw and/or toggle	412	...With flattened cross section pin
380	.....Extension coil spring between jaw and handle member	413	...With toothed-member fulcrum on notched handle
381	..Including grip lever actuator and pivoted jaw (e.g., tandem levers)	414	...With opposed interdigitated concentric segmental annular portions
382	...With adjustment means	415	.Crossed handles
383	...With link connecting jaw and grip lever	416	..Joint detail
383.5	..Including cam actuator and pivoted jaw	417	..Resiliently urged
384	..With adjustment means	418	.Jaw features
385	.Adjustable relationship between jaw(s) and/or handle(s)	419	..Tined or digitated jaws
386	..By relative positioning of jaw(s) only	420	..Jaws extend laterally beyond side edge plane of handle(s)
387	...Both jaws adjustable	421	..Jaw attachment and/or inserts
388	...By threaded elements	422	...Selective
389	....Rotatable screw type	423	....By detachment
390	....Rotatable nut type	424	...Articulated
391	...Maintained by detent and rack	424.5	..Nonplanar jaw face
392	...Maintained by locked interdigitated members	426	...And diversely shaped face
393	..By angular orientation of one handle portion relative to other	426.5	...Work conforming face
394	..By selection of pivot hole(s) in each handle	427	.Resiliently urged
395	..By threaded adjustment means	427.5	.Handle
396	...Worm and rack type	463	<b>INCLUDING TOOL DRIVING BY IMPACT DELIVERING COMPONENT OR COOPERATING ANVIL</b>
397	...Peripherally threaded handle manipulated for travel relative to other handle	464	.Motor or gear driven
398	...Threaded element travels relative to both handles	465	.Structurally constrained to arcuate movement
399	...Rotatable screw in nut	466	..About turning axis of work engaging portion
400	....Screw attached to joint	52	<b>WRENCH, SCREWDRIVER, OR DRIVER THEREFOR</b>
401	....Nut attached to joint	53.1	.With elongated hot line stick
402	...Rotatable nut on screw	53.11	..Globe manipulator
403	....Screw attached to joint	53.12	...Rotatable grasper
404	....Nut attached to joint	53.2	.Stud-removal and implacement
405	..By manipulation of pivot-carrying member	429	.Responsive to movement of work
406	...With angular orientation of eccentric pivots joining handles	467	.Responsive to torque on work
407	..By relative sliding or slipping of handles	468	..With marking mechanism
408	...With fulcrum-carrying member	469	..Means for regulating motor
409	....With positive lock for member	470	...Fluid motor
409.5	....With spring urged lock for member	471	..Permanently deformable component
		472	..Relatively movable work contacting components
		473	..Rotatable, coaxial, clutching components
		474	...Having intermediate, disparate, interlock element
		475	...Having complementary formations

476	...Having friction type contact surfaces	432	...Including vibratory work supporting member
477	..Work engaging portion attached to and turned by resilient member	433	...Including revolvably driven work contacting member
478	..Work engaging portion pivotally or rotatably connected to handle	434	...Including driven, flexible, work supporting strip
479	...With electric signal device	435	...Including driven, reciprocating, conveying member
480	...Axis of connection coaxial to rotational axis of work	57.38	..With tensioning means
481	....With arm extending from portion	57.39	..Step by step
482	....With pivoted locking pawl	57.4	..With support
483	...With arm extending from portion and through connection	57.41	...Vehicular
54	.Machine	57.42	..Direct drive
55	..Bolt-holding	57.43	...Flexible
56	...Gear-operated	57.44	...Fluid
57	..Gear-operated	57.45	...Oblique angle
57.11	...With motor	57.46	...Tangential engagement
57.12	....Oblique angle drive	57.5	.Turret head
57.13	....Right angle drive	74	.Wheel or endless track operated
57.14	....Parallel axis drive	75	..Hub-rim grasp
57.15	...Round work	76	...Internal
57.16	....With additional work-engaging means	58	.Handle clutched to head
57.17	....Flexible jaw	58.1	..With additional head-turning means
57.18	....Cam-operated jaw	58.2	..Radially slotted or open end head
57.19	....Fluid-operated jaw	58.3	..Axially movable clutching parts
57.2	....Pivoted jaw	58.4	..Positive two-way drive (e.g., dog clutch)
57.21	....Sliding jaw	58.5	..Radially extending eccentrically movable handle
57.22	...Multiple drive or driven means	59.1	..Ball or roller wedge
57.23	....With magazine	60	..One-way detent drive, e.g., ratchet
57.24	...With support	61	...Pivoted pawl
57.25	....Vehicular	62	....Reversing
57.26	...Adjustable angle drive	63	.....Single
57.27	....Flexible shaft	63.1	...Reversing
57.28	...Oblique angle drive	63.2	....Single pawl
57.29	...Right angle drive	436	.Having work engaging and force exerting portion inserted into cavity (e.g., allen wrench, screwdriver)
57.3	...Parallel axis drive	437	..Combined with or usable as diverse-type wrench
57.31	...Common axis drive	438	..Having structure adapting portion or tool for separation
57.32	..Double or duplex	439	..Including discrete, separately usable inserted portions
57.33	..Round work	440	...Pivotally or rotatably mounted
57.34	...With additional work-engaging means	441	..Inserted portion cuts into or deforms cavity
57.35	...With support	442	..Inserted portion having relatively movable components
57.36	..Multiple work-engaging means		
57.37	..With feed or magazine means		
430	...Utilizing fluid to convey work		
431	...Including chute having longitudinal axis collinear with rotational axis of work turning portion		

443	...Having camming or wedging element for moving components	90.1	.Plural pivoted jaws and handle-lever
444	....Axially shiftable element located between and wedging against components	90.2	..Cam or gear operated
445	.....With threaded surface for cooperating with mating tool structure	90.3	..Jaws enclose work
446	....Rotatable element located between and camming against components	90.4	...Including latch to connect jaw to handle-lever
447	...Having cooperating threaded element type actuating means	90.5	....At least three jaws enclose work
448	...Having resilient or spring biased component	90.6	...Including latch to connect pivoted jaws
449	....Biased component rotated about axis collinear to rotational axis of tool	90.7	....At least three jaws enclose work
450	..Inserted portion mounted to pivot or swivel relative to longitudinal axis of handle	90.8	.....Two jaw pairs connected by latch
451	..With separate means for guiding or gripping work	90.9	..Including means to adjust or to secure jaw in adjusted position
452	...Having resilient, relatively movable, work gripping members	91.1	..Slidable pivot
453	....With camming or wedging element for moving members	91.2	..First jaw pivoted directly to handle and to second jaw
454	...Having pivoted, relatively movable, work gripping members	91.3	..Two jaws pivoted directly to intermediate member
455	....With camming or wedging element for moving members	92	.Pivoted inner jaw
456	...Having member with work underlying portion	93	..Nut or screw fulcrum
457	....Member spring biased for axial movement	94	..Pin fulcrum
458	....Resilient member	95	...Roller jaw
459	..Inserted portion having threaded periphery	96	....Pinion
460	..Inserted portion having plural, noncollinear blades (e.g., Phillips)	97	...Spring-pressed
461	..Inserted portion having plural, separate, work-engaging projections		.Pivoted outer jaw
64	.Flexible	98	..Fixed fulcrum
65	..Threaded adjustment	99	...Nontraveling jaw
65.2	..Link	100	....Spring-pressed
68	...Handle jaw	101	...Traveling jaw
69	....Pivoted	102	....Nut fulcrum
70	....Duplex	103	....Rocking sleeve
65.4	...Toothed adjustment	104	.....Spring-pressed
73	.U-crank arm	105	.....Fulcrum washer
77	.Double-ended, simultaneous adjustment	106	.....Sleeve-enclosed nut
		107	..Traveling fulcrum
		108	...Threaded handlebar
		109	....Axillary rotating
		110	...Slotted guide
		111	...Fulcrum tooth and rack
		112	.Pivoted side jaw
		113	..Bevel-closing
		114	...Cammed into socket by axial nut or screw
		115	....Sleeve socket nut
		116	...Rotating ring
		117	...Wedge
		118	..Rocking link
		126	..Transverse screw clamp
		127	.Sliding jaw, handle-lever grip
			..Claw

128	.Sliding jaw, cam-closing	176.15	..Having means to engage work axially
129	.Slidable jaw adjustments	176.2	...And means to engage peripheral face of work
129.5	..Rack	176.3	..Having relatively movable jaws
131	...Interlocking jaw handles	119	.Rigid jaws
132	...Locking set screw or nut	120	..Round work
133	...Pinion lock	121.1	..Enclosed (e.g., socket)
134	...Pivoted rack catch	122	...Watch and clock keys
135	....Nontraveling	123	....Dust protectors
136	.....Intermediate fulcrum	124.1	...With nut ejectors
137	....Transverse	125	...Work-holding
138	....Cam-seated	124.2	...Slotted socket
139	....Indirectly operated	124.3	...Through socket and perpendicular handle
140	....Intermediate fulcrum	124.4	...Plural sockets
141	...Shank-engaged cam	124.5	....Slidably or pivotally connected to handle or each other
142	...Sliding rack catch	124.6	...Having axial opening for removable handle
143	....Cam-seated	124.7	...Having perpendicular handle
144	....Screw- or nut-seated	125.1	..Double-ended
145	....Spring-seated	177.1	.Handle or shank
146	...Spring-seated jaw frame	177.8	..Angularly adjustable handle
147	....Integral frame and teeth	177.9	...With yieldable one-way detent
148	...Wedge lock	177.2	..Extensible handle or handle extension
149	...Wedge pusher	177.3	..Having finger opening
150	..Shank grip	177.4	..Having means to store parts
151	...Side jaw	177.5	..Having terminal cross arm
152	...Clutch yoke	177.6	..Foldable or flexible
153	...Roller clutch	177.7	..Having pivoted handle section
154	...Locking incline	177.75	...Universal joint
155	..Thread	177.85	..Including socket and boss type connecting means
156	...Displaceable half nut	178	.Reversible jaws
157	...Displaceable nut or screw	179	.Sliding jaw face
158	....Traveling screw, shank rack	462	.Having stationary structure for supporting wrench or screwdriver
159	...Interrupted	180.1	.Attachment, or including adjunct or replaceable portion
160	....Nut set	181	..Cutters
161	.....Traveling nut	182	...Rotary
162	....Traveling screw, shank rack	183	..Roller clutch
163	...Right and left threads	184	..Shank-embracing
164	...Rotatable threaded handle shank	185	..Socket reducers
165	...Sliding side jaw	185.1	..Removable jaw face
166	...Nontraveling rotatable nut	185.2	..Movably mounted
167	....Intermediate	186	.Jaw faces
168	.....Causing outer jaw to slide	19	<b>DEFORMABLE HEAD MALLET</b>
169	....Terminal	20	<b>HAMMER</b>
170	.....Causing outer jaw to slide		
171	...Nontraveling rotatable screw		
172	....Bracket-bearing		
173	....Spiral groove engaged by slidable actuator		
174	...Traveling and rotating nut		
175	....Threaded handlebar		
176	...Traveling and rotating screw		
176.1	....Shank rack		
176.1	.Spanner		

21	.Having work protector surrounding face	DIG 2	SPIRAL DRIVE FOR WRENCHES
22	.Having shock absorbing means	DIG 3	WRENCHES, THREAD-ADJUSTMENT LOCK
23	.Having nail placer	DIG 4	DOUBLE ADJUSTMENTS, SLIDING JAW
24	..Magnetic	DIG 5	WRENCH SCALES AND INDICIA
25	.Having replaceable striking face	DIG 6	SPRING MEANS BIASING WRENCH JAWS
26	.Having plural striking faces	DIG 7	BICYCLE SPOKE OR NIPPLE WRENCH
27	.Rod encircling type	DIG 8	CROWFOOT-TYPE WRENCHES
28	BIT STOCK HAVING MANUAL DRIVE MEANS (E.G., BRACE)	DIG 9	PIVOTED JAW LATCH MEANS
29	.Having ratchet mechanism	DIG 10	IRIS-TYPE WRENCH HEAD
30	..Straight crank arm	DIG 11	ADAPTERS FOR DIFFERENT-SIZED FASTENERS
31	..Adjustable pawl	DIG 12	POWER HAMMER
32	..Pivoted pawl		
33	..Sliding pawl		
34	.Straight stock having side driving gear		
35	.Having U-shaped crank arm		
36	..Speeding gear		
37	..Bit shaft inclined relative to crank		
484	FOR ADJUSTING VARIABLE POSITIONED PARTS		
485	SPREADER		
486	RESILIENT ARTICLE TENSIONER OR COMPRESSOR		
489	HANDLE FOR TOOL		
490	.Having storage compartment		
491	.Having discrete relatively movable tool clamp		
492	.Having cap or reinforcing means		
487	HAND HELD HOLDER OR HAVING CLAMP		
488	MISCELLANEOUS		

**CROSS-REFERENCE ART COLLECTIONS**

900	WRENCH OR SCREWDRIVER CONSTRUCTED FROM SPECIFIC MATERIAL
901	WRENCH OR SCREWDRIVER ADAPTED TO TURN EYE SCREW

**FOREIGN ART COLLECTIONS**

FOR CLASS-RELATED FOREIGN DOCUMENTS

**DIGESTS**

DIG 1	TOOL-SUPPORT ADJUNCTS
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